



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

OFFICE OF THE
REGIONAL ADMINISTRATOR

11 MAY 1998

MEMORANDUM

SUBJECT: Nationwide Occurrence of Perchlorate Contamination

FROM: *Helen Takak*
Felicia Marcus, Regional Administrator

TO: See Below

Last October we alerted you to a very serious environmental problem in Region 9 with the chemical perchlorate. We are providing you with information we have recently received which indicates perchlorate has been widely used across the country. We strongly recommend the testing of soil and water supplies which could be affected by major facilities on the enclosed lists, since all 14 sites investigated so far in Region 9 have discovered groundwater contamination by perchlorate. The enclosed information identifies former perchlorate manufacturers in New York, Mississippi, Oregon and possibly Ohio which would warrant inquiries on production and shipment. Additionally, our experience suggests the need for comprehensive research on the use, testing and disposal of perchlorate by federal agencies, their contractors and other industrial users which could release perchlorate to the environment.

We requested information about perchlorate shipments (greater than 500 pounds in any one year) from perchlorate manufacturers, and information about major users of perchlorate from the US Air Force. As you can see from the enclosed lists, we have information on over 150 different facilities in more than 35 states where perchlorate has been used. We are also aware of shipments to foreign countries. Since the 1950s, over 870 million pounds of perchlorate have been manufactured in the US. Military and space applications are widely represented on these lists.

Perchlorate (ClO_4^-) is a man-made inorganic salt used in solid rocket fuel, in munitions and in the pyrotechnics industry. Perchlorate in its various chemical forms is essentially as soluble as table salt, can persist for decades in the environment, and easily dissolves and moves through both groundwater and surface water. Perchlorate from at least 12 separate sources has been detected in 110 public water supply wells in California and in detectable concentrations in the Colorado River from sources in Nevada. Most sites appear to be related to solid rocket fuel manufacturing and testing. The perchlorate manufacturers estimate that approximately 90% of perchlorate is used for rocket fuel, with most of the rest used for explosives and pyrotechnics.

There remain many uncertainties concerning the toxicity and environmental effects of perchlorate. In high dosages, perchlorate interferes with thyroid activity and may have other health effects, particularly on children and sensitive populations. EPA has established a

provisional reference dose in the range of 4 to 18 parts per billion in drinking water, and the State of California has set an action level of 18 ppb in public water supply.

We would encourage you to consider sending staff to the Interagency Perchlorate Steering Committee stakeholder forum which is scheduled for May 19-21 in Henderson, Nevada, cosponsored by federal, state, tribal and local agencies. This is a national stakeholder forum on perchlorate which will address many of the uncertainties surrounding this relatively new environmental and public health issue. A flyer for the meeting is attached.

Please feel free to contact Kevin Mayer of my staff at (415) 744-2248 if you have any questions or need additional information.

5 Enclosures

Addressees:

John P. DeVillars, Regional Administrator, Region 1
Jeanne M. Fox, Regional Administrator, Region 2
W. Michael McCabe, Regional Administrator Region 3
John H. Hankinson, Jr., Regional Administrator, Region 4
David A. Ullrich, Acting Regional Administrator, Region 5
Gerald Clifford, Regional Administrator, Region 6
Dennis Grams, Regional Administrator, Region 7
Bill Yellowtail, Regional Administrator, Region 8
Charles C. Clarke, Regional Administrator, Region 10
Timothy Fields, Jr., Assistant Administrator, OSWER
Robert Perciasepe, Assistant Administrator, OW
Henry L. Longest II, Assistant Administrator, ORD

cc: Fred Hansen, Deputy Administrator, Office of the Administrator
Peter Robertson, Chief of Staff, Office of the Administrator
Gail Cooper, Special Assistant, Office of the Administrator
Patricia L. Meaney, Sr. Advisor for Mgmt/Asst. Regional Administrator, Region 1
Richard L. Caspe, Director, Emergency & Remedial Response Division, Region 2
Abraham Ferdas, Acting Director, Hazardous Site Cleanup Division, Region 3
Dick Green, Acting Director, Waste Management Division, Region 4
William Muno, Director, Superfund Division, Region 5
Myron Knudson, Director, Superfund Division, Region 6
Michael Sanderson, Superfund Division, Region 7
Max Dodson, Asst. RA, Ofc. Of Ecosystems Protection & Remediation, Region 8
Keith Takata, Director, Superfund Division, Region 9
Randy Smith, Office of Environmental Cleanup, Region 10